THE SKWEEZEE:

EMPOWERING OCCUPATIONAL THERAPISTS WITH A DIY-TOOLKIT FOR SMART SOFT OBJECTS

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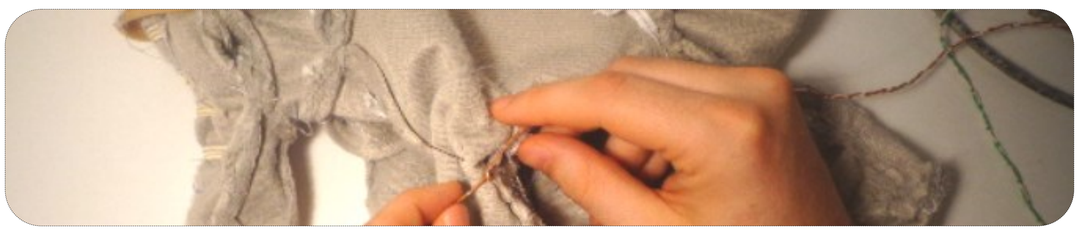
Background

The Skweezee, a "do-it-yourself (DIY)-toolkit" is designed to empower occupational therapists to create tailor-made, unique assistive solutions for their clients.



Aim

The toolkit aims to enable occupational therapists to turn everyday soft objects into smart devices that can be programmed to recognize specific fine and gross motor manipulations and use them during interventions. These smart objects replace the computer mouse and then can be used to control applications or to play games on the computer.

Method

A participatory design was used to develop the Skweezee DIY-toolkit in an iterative way.

Results

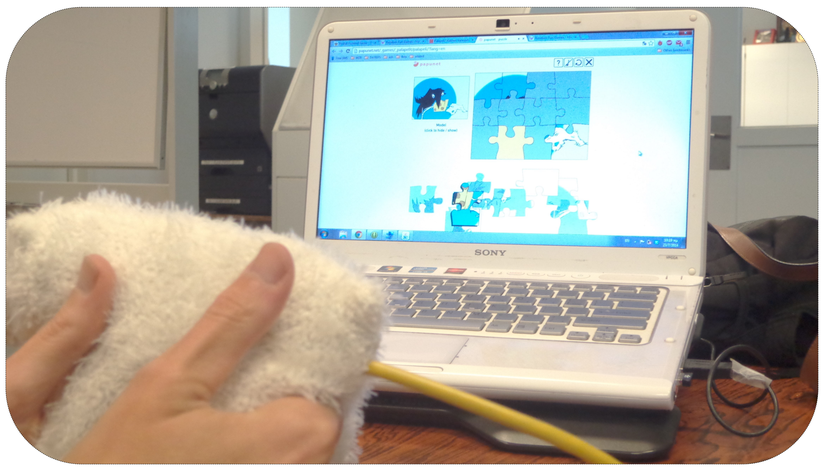
The evaluation reveals that occupational therapists were able to make use of the toolkit without the aid of a technical experts. The therapists hacked everyday objects such as cushions, socks, cuddly toys and repurposed them for therapy. They computationally augmented them and tailored them to clients' needs and desires.

Conclusion

The DIY- Skweeze toolkit ensured that it could deliver a diversity of solutions to tailor a diversity of client 'needs. Occupational therapists are creative in making client-centred Skweezee objects.

Application into practice

The DIY-toolkit is able to give clients additional challenges in occupational therapy sessions and delivers meaningful feedback. The tailor-made Skweezees are increasing motivation for interaction. With this toolkit, occupational therapists can explore all different kind of objects, gestures and games, to make exercises fun.



References

Moraiti, A., Vanden Abeele, V., Vanroye, E., Geurts, L. (2015). Empowering Occupational Therapists with a DIY-toolkit for Smart Soft Objects. In : Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction. International Conference on Tangible, Embedded, and Embodied Interaction. Stanford, CA, USA, 15-19 January 2015 (pp. 387-394). New York, NY, USA: ACM

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Project website : https://projects.groept.be/~skweezee/